Attorney Docket No.:SAM-0497 Application Serial No.: 10/706,460

Reply to Office Action of: May 25, 2004

Amendments to the Claims:

Please amend claims 1 and 6 as follows.

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

(Currently amended) A clock squarer having a semiconductor chip pad and an 1.

electrostatic protective circuit connected at a node, and a square wave generating circuit, the

clock squarer including a capacitor provided between the semiconductor chip pad the node and

the square wave generating circuit, wherein, in response to an input signal at the chip pad, a

square wave having a stable duty is generated at an output of the square wave generating circuit,

irrespective of variance in environmental conditions, and wherein the capacitor prevents a

leakage current from flowing between the square wave generating circuit and the electrostatic

protective circuit.

(Original) The clock squarer of claim 1 wherein the environmental conditions include at 2.

least one of temperature, process and supply voltage.

(Original) The clock squarer of claim 1 wherein the capacitor is provided in series 3.

between the semiconductor chip pad and the square wave generating circuit.

(Original) The clock squarer of claim 1, wherein the square wave generating circuit 4.

comprises:

an inverter receiving an output signal of the capacitor and inverting the signal;

a feedback resistor connected in parallel with the inverter; and

a Schmitt trigger circuit receiving an output signal of the inverter and, in response,

generating a square wave.

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- 5. (Original) The clock squarer of claim 1, wherein the capacitor comprises a Metal-Insulator-Metal (MIM) capacitor.
- 6. (Currently amended) A clock squarer, comprising:

a semiconductor chip pad for connecting an external circuit with an internal circuit of a semiconductor chip;

an electrostatic protective circuit connected to the semiconductor chip pad at a node; a capacitor having a first terminal connected to the semiconductor chip pad the node; and a square wave generating circuit connected to a second terminal of the capacitor for generating a square wave at an output terminal thereof based on an input signal received at the semiconductor chip pad;

wherein the capacitor prevents a leakage current from flowing between the square wave generating circuit and the electrostatic protective circuit.

- 7. (Original) The clock squarer of claim 6, wherein the electrostatic protective circuit comprises:
- a PMOS transistor diode-connected between the semiconductor chip pad and a supply voltage; and

an NMOS transistor diode-connected between the semiconductor chip pad and a ground voltage.

8. (Original) The clock squarer of claim 6, wherein the square wave generating circuit comprises:

an inverter receiving an output signal of the capacitor and inverting the signal;

- a feedback resistor connected in parallel with the inverter; and
- a Schmitt trigger circuit receiving an output signal of the inverter and, in response, generating a square wave.
- 9. (Original) The clock square of claim 6, wherein the capacitor is comprises a Metal-

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Insulator-Metal (MIM) capacitor.

10. (Original) The clock squarer of claim 6 wherein the capacitor is connected in series between the semiconductor chip pad and the square wave generating circuit.